

**LANDSBURG MITIGATION AGREEMENT  
for the  
FISH MIGRATION BARRIER AT THE LANDSBURG DIVERSION DAM**

**Between**

**The City of Seattle**

**and**

**The State of Washington, Acting Through Its Governor;  
and the Department of Fish and Wildlife**

**and**

**The United States Department of Commerce,  
National Marine Fisheries Service**

**and**

**The U.S. Department of the Interior,  
Fish and Wildlife Service**

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## **A. GENERAL TERMS AND CONDITIONS**

### **1. The Parties**

This Landsburg Mitigation Agreement (“LMA”) is entered into by and between the City of Seattle (“the City”), a municipal corporation; the State of Washington, acting through its Governor; and the Washington State Department of Fish and Wildlife (“WDFW”); the United States Department of Commerce, National Marine Fisheries Service (“NMFS”); and the Department of the Interior, Fish and Wildlife Service (“FWS”). For purposes of this LMA, the term “Parties” refers collectively to the City, WDFW, NMFS, and FWS. The terms of this LMA shall be binding upon the respective successors or assigns of each Party.

### **2. Purpose and Scope**

a. The City operates a municipal water supply diversion dam which has blocked approximately 12.4 miles of formerly accessible mainstem anadromous fish habitat on the Cedar River since the turn of the century. In addition, the City is responsible for managing the forest lands that constitute the entire sub-basin for this reach of river. Due to its present high quality condition and the City’s commitment through its Cedar River Watershed Habitat Conservation Plan (“HCP”) to manage the surrounding riparian and upland forest as an ecological reserve, the 12.4 miles of mainstem fish habitat plus associated tributary fish habitat between Lower Cedar Falls and the Landsburg Dam represents one of the most significant potential freshwater refuges for anadromous fish in our region.

The City cannot allow fish passage to compromise drinking water quality or risk public health. Concern for the water quality effects of post-spawning fish carcasses has been a primary constraint on the decision of which anadromous fish, if any, could be allowed to pass above the water intake. Microbial and nutrient increases caused by the presence of decaying carcasses upstream of the water supply intake could adversely affect drinking water quality. However, the City recognizes the value of the highly protected habitat above the diversion dam for anadromous fish and proposes selective fish passage that is compatible with protection of drinking water quality. For species and/or circumstances in which fish passage must be limited or precluded, the City proposes various levels of funding to support alternative forms of mitigation. In addition, the Parties recognize that fish habitat in the lower Cedar River downstream of the City’s ownership boundary has been fundamentally degraded by rerouting, land development, bank armoring, and regulation of stream flows, but that many opportunities exist for habitat restoration downstream of Landsburg.

In the past, strong concerns have been expressed by the City and by state and federal drinking water regulators about the human health risks associated with the passage of large numbers of salmon into the municipal water supply above the Landsburg diversion dam. Spawning carcass biomass (and therefore relative run

size) is an important factor when considering the impact of anadromous fish reintroduction above Landsburg.

The City conducted a careful analysis of the potential impact of salmon spawning carcasses on drinking water quality. This assessment showed that, while passage of the mass-spawning sockeye above the water intake would compromise drinking water quality and public health, passage of coho, chinook, and steelhead above the intake was unlikely to present drinking water problems as long as the potential impacts of such passage on drinking water are carefully monitored, and as long as passage can be controlled if any significant problems develop.

b. The primary objectives of this mitigation agreement are to (1) Implement biologically sound, short and long term solutions that help provide for the recovery and persistence of healthy, harvestable runs of sockeye, coho, and chinook salmon and steelhead trout in the Cedar River; (2) Maintain a safe, high quality drinking water supply; (3) Implement restoration alternatives that have a high likelihood for success and that provide substantial value for target resources; (4) Provide fish passage over the Landsburg Diversion Dam, consistent with water quality protection, that is coordinated with run recovery, biological need, water supply operations, and facility maintenance requirements; (5) Coordinate with and support other compatible fish protection and restoration activities in the basin to maximize total benefits to fisheries resources within an ecosystem context; and (6) Design restoration measures in a manner that satisfies any mitigation obligations the City may have for the Diversion Facilities (as defined in A.2.c.) as defined by existing state and federal law and pursuant to City ordinance and initiatives.

c. The City commits, as specified in this agreement, to long-term measures to help restore anadromous fish runs and mitigate for the blockage at Landsburg Dam, including fish passage for coho, chinook, and steelhead; artificial production facilities as alternative mitigation to passage for sockeye; and habitat restoration below Landsburg Dam. In other agreements which, like this one, are part of the City's Cedar River Watershed Habitat Conservation Plan under the federal Endangered Species Act, the City addresses streamflows and habitat protection and rehabilitation above Landsburg Dam. In particular, the City commits to provide for the planning, design, construction and operation of fish passage and production facilities as specified in sections B through E. The term "Diversion Facilities" refers to the City's Landsburg Diversion Dam and water supply intake, and the water supply pipeline crossing at river mile 21.4 of the Cedar River, plus all appurtenant pipelines and related structures, as these facilities presently exist or may hereafter be reconstructed. Changes to the Diversion Facilities or to other facilities in the City's water supply system shall not change the Parties' commitments set forth in this LMA.

d. The Parties agree that the City's compliance with the obligations contained in this LMA, as specified herein, shall, during the term of

this agreement, fully satisfy any responsibilities that each Party may contend the City has under existing state and/or federal law with respect to mitigation for the blockage of fish passage at Landsburg and the provision of fish guards (screens) on the water intake at the Diversion Facilities. The LMA does not include instream flows, which are addressed by a different agreement.

e. There is established a Cedar River Anadromous Fish Committee (“the Committee” or “CRAFC”) to aid in communication among the Parties and to advise the City concerning implementation of this agreement. The membership and role of this group is further described in section F of this agreement. The Committee shall be formed and begin operation not later than ninety (90) days after the Effective Date of this agreement.

### **3. Effective Date**

This LMA shall become effective on the first day after both of the following conditions have been met (“Effective Date”):

- a. all Parties sign the LMA, and
- b. the City, USFWS, and NMFS sign an Implementation Agreement (“IA”) for the HCP.

### **4. Term**

The term of this LMA shall be 49 years beyond the end of HCP Year 1, as defined in subsection A.8, subject to extension upon written agreement of all Parties.

### **5. Amendment**

This LMA may be amended by mutual agreement of all Parties. Any amendment shall be in writing and signed by all Parties.

### **6. Funding and Accomplishment of Work**

a. The City agrees to make available for LMA implementation the full amounts of money specified in Exhibit A (totaling \$36,927,000) for each of the four Cost Categories of (1) “Coho, chinook, and steelhead mitigation,” (2) “Sockeye mitigation,” (3) “Coho, chinook, and steelhead research and monitoring,” and (4) “Sockeye research and monitoring.” This commitment applies regardless of whether cost savings are achieved on individual activities. Except as provided in section B.2.a, the City will not be required to exceed these cost caps for each of these Cost Categories, unless it agrees to do so through a written amendment, or the Parties have agreed to extend the term of this agreement as provided for in A.4. Exhibit A, attached to this agreement and incorporated by reference, shows the maximum expenditures

which could be required of the City under this agreement, for each HCP year. Unspent funds from previous years can be carried over and added to annual maximums in succeeding years. Amounts actually spent in any given year will vary depending on the progress of various activities.

b. All dollar amounts in this LMA are represented in 1996 dollars. These figures will be adjusted annually each full year after 1996 for inflation or deflation, based on the “Consumer Price Index for All Urban Consumers” published by the Bureau of Labor Statistics of the U.S. Department of Labor. If this index is discontinued or becomes unavailable, a comparable index will be designated by the Parties. The inflation adjustment established in this subsection shall also apply to the caps on City-initiated fund transfers established in subsection A.7, below.

c. Except as otherwise provided in this agreement, and subject to applicable laws and regulations, the City retains authority to determine how LMA activities will be accomplished, including who will conduct the actual work. However, the City will consider cooperative agreements with any of the Parties as a means of accomplishing some activities, including the use of the Parties’ staff, as allowed under law. The City does not, by this provision, assert authority to establish targets, timing, or location for releasing, planting, or placing fish in state waters from any production facility.

d. All Parties shall support the efficient and effective use of funds to accomplish the goals, objectives, and elements of the LMA within the overall cost cap and fund transfer limitations described below.

e. Nothing contained in this agreement is intended to prevent the Parties from adding additional features to a facility, or otherwise improving its functioning for the long-term benefit of fish resources, through cost sharing or similar arrangements.

## **7. Transfers of Funds**

Unless otherwise specified in this agreement no transfers of funds between the Cost Categories identified above in subsection A.6.a. may occur without a written amendment to this agreement (e.g., City can’t transfer funds from “sockeye mitigation” to “coho, chinook and steelhead mitigation”). However, the City shall have authority to make transfers of funds among activities within each of the four Cost Categories (e.g., City can transfer funds within “sockeye mitigation” cost category from interim mitigation to hatchery construction), provided such transfers (1) do not exceed \$50,000 for capital (construction) projects or \$15,000 for operating activities; (2) don’t exceed more than three transfers per year in any one cost category; (3) are described in annual reports to the Committee; (4) do not affect the City’s ability to accomplish agreed-upon elements of the HCP; and (5) do not compromise the overall purposes and objectives of the HCP, including the LMA. Transfers of funds greater than

\$50,000 (capital) or \$15,000 (operating) within each Cost Category can be made only with agreement of all Parties.

## **8. Convention Adopted for Schedule Commitments**

The schedule commitments in this LMA are expressed in terms of HCP Years. "HCP Year 1" shall mean the period between the Effective Date and the end of the following full calendar year. "HCP Year 2" and all succeeding HCP Years shall coincide with the calendar years that follow the end of HCP Year 1.

## **9. Resolution of Disputes**

a. The Parties recognize that disputes concerning implementation of this LMA may arise from time to time. It is the intention of the Parties to work together in good faith to resolve any such disputes through the procedures set forth below. Although the Parties prefer the use of alternative dispute resolution to the extent practicable, it is not a prerequisite to initiation of judicial proceedings as provided for under A.12.

b. Any Party wishing to resolve a dispute under this LMA shall notify the other Parties by setting forth its position in writing, including a specific description of the situation it wishes to address, the reasons why it believes certain actions or conditions constitute a violation of the LMA (if that is the contention), and the action it wishes the Parties to take. Any other Party may submit to all of the Parties a written response within 30 days.

c. Following this exchange of written statements, any Party through a policy-level administrator may invoke review of the dispute by contacting other Parties' policy-level administrators and arranging for a suitable telephone or in-person conference.

d. In the event that the policy-level administrators fail to resolve the dispute, any Party may request mediation, which shall take place only if agreed to by all of the Parties. The mediator shall be selected by the Parties within 10 days of the request, and the process concluded within an additional 30 days, unless the Parties otherwise agree. Costs shall be shared equally by all Parties.

## **10. Force Majeure**

a. The term "force majeure," as used in this document, means events that are beyond the reasonable control of, and that did not occur through the fault or negligence of, the City or any entity controlled by the City, including its contractors and subcontractors to the extent they are carrying out authorized activities, including but not limited to: acts of God; sudden actions of the elements, including fire; or actions of Congress, the Washington State Legislature, federal or state agencies or courts, or an action of a local jurisdiction



other than the City that prevents the City from performing its obligations under the terms of this agreement.

b. Force majeure procedures. In the event that the City is wholly or partially prevented from performing obligations under this agreement because of a force majeure event, the City will be excused from whatever performance is affected by such force majeure event to the extent so affected, and such failure to perform will not be considered a material breach of this agreement, provided that

(1) the City uses its best efforts to avoid and mitigate the effects of any delay;

(2) the suspension of performance is of no greater scope and no longer duration than is reasonably required by the force majeure;

(3) the City notifies the Parties orally within a reasonable time (normally not to exceed 48 hours) after becoming aware of any event that the City contends constitutes a force majeure, and in writing within seven (7) calendar days after the event. Such notice will: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures; and

(4) when the City is able to resume performance of its obligations, it provides the Parties written notice to that effect.

## **11. Termination by the City**

The City may voluntarily terminate this agreement, provided it gives all other Parties written notice of its intent to terminate, explaining its reasons therefor, at least two years in advance of termination, and provided further that no such notice may be given in advance of the end of HCP Year 4.

## **12. Remedies**

Each Party shall have all remedies otherwise available in equity, including specific performance, to enforce the terms of this agreement. No Party shall be liable in damages to any other Party or other person for any breach of this agreement, any performance or failure to perform a mandatory or discretionary obligation imposed by this agreement, or any other cause of action arising from this agreement.

## **B. INTERIM MEASURES FOR STEELHEAD TROUT, AND COHO, CHINOOK, AND SOCKEYE SALMON**

### **1. General**

The City will make available the sum of \$1,744,000 for the implementation of interim mitigation measures as described in this section B for the four anadromous fish species (\$720,000 for steelhead trout, coho and chinook salmon mitigation, and \$1,024,000 for sockeye salmon) until long-term mitigation measures are in place. The specific measures, implementation schedules, and cost scheduling will be as identified below unless modified by agreement of the Parties.

### **2. Interim Measures for Steelhead Trout, and Coho and Chinook Salmon**

a. The City will provide up to \$90,000 per HCP year for interim mitigation measures for steelhead trout, and coho and chinook salmon, beginning in HCP Year 1 and continuing until the end of HCP Year 8. In the event that completion of construction of any of these facilities is delayed beyond the end of HCP Year 8, the provisions of section C.2.c, C.3.c, and C.4.c shall govern continued mitigation measures. Notwithstanding any other provision of this agreement, if interim mitigation must be continued beyond HCP Year 8 for one or more of these facilities, the differential cost of continuing such interim mitigation, over what would otherwise be the cost of operating the permanent facilities, shall not be charged against the overall HCP cost cap, but shall be borne by the City independently of such cost cap.

b. The interim mitigation funds shall be used, with agreement of all Parties, to accomplish the following: i) fund the implementation of life history, genetic, demographic and/or ecological studies to fill critical information gaps; ii) implement emergency supplemental production programs designed to help sustain and rebuild the populations in a manner that helps ensure their long-term reproductive fitness, and capacity to adapt to changing environmental conditions; and/or iii) other measures deemed appropriate by the Parties to achieve the objectives of the LMA. If the Parties fail to agree on the form of interim mitigation within two years of initiating discussion of the issue, then the City shall spend the funds for fish habitat acquisition, restoration, or enhancement within the Lake Washington Basin.

### **3. Interim Measures for Sockeye Salmon**

The City will provide up to \$256,000 per HCP Year for interim sockeye mitigation. Unless otherwise agreed to by the Parties, this funding is dedicated to the operation of the existing interim sockeye salmon hatchery facility at Landsburg, beginning in HCP Year 1 and continuing until the end of HCP Year 4

or until the proposed new hatchery facilities are completed, whichever is sooner, and subject to the provisions of D.2.f. The interim sockeye hatchery is owned by the City, which will remain responsible for assuring its continued operation, as required by the terms of this agreement. The facility will be operated by WDFW pursuant to a Memorandum of Agreement from July 1998 until July 2003. In the event that the replacement hatchery is not constructed by July 2003, the City will operate the hatchery, enter into a MOA with WDFW, or contract with another party to operate the hatchery.

## **C. LONG-TERM MEASURES FOR STEELHEAD TROUT, AND COHO AND CHINOOK SALMON**

### **1. General**

a. The Parties wish to enable anadromous fish to fully utilize the river habitats above Landsburg Dam, insofar as possible without negatively impacting safe drinking water. The City conducted a careful risk assessment of potential salmonid passage over Landsburg Dam and determined that, while passage of the mass-spawning sockeye above the water intake would compromise drinking water quality and public health, passage of the much less numerous coho, chinook, and steelhead above the intake was unlikely to present drinking water problems as long as the potential impacts of such passage on drinking water are carefully monitored, and as long as passage could be limited if any problems occur. Therefore, as further specified in Exhibit A, the City will provide up to \$8,178,000 for the design, permitting (including any construction mitigation), construction, and operation of fish passage and protection facilities as described in subsections C.2 through C.4. Such expenditures, as well as the dates for initiation or completion of the activities specified below, are subject to the City's ability to obtain any necessary permits and to successfully complete any requisite review process under the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) within the cost schedules and time frames described in this section C.

b. Notwithstanding other provisions of this agreement, the City will create a special Design Contingency Fund of \$583,000 in addition to the amounts specified in the HCP Cost Categories. This contingency amount is in addition to the 20% contingency assumed in the conceptual design cost estimates. This Fund shall be made available for construction of any of the fish passage facilities identified below, in the event that the City determines, following a value engineering process at the 30% design phase, that such additional sums are needed to achieve the objectives of this agreement. Such funds shall not be available to fund any changes to facility designs that alter the intent of such facilities or expand their purposes beyond those stated in this agreement.

c. Once any one of the fish passage and protection facilities described in subsections C.2 through C.4 is completed, the City will provide up to

\$50,000 per year to operate and maintain said facilities, for each year of operation for the duration of this LMA. Money for this activity is included in the total identified in subparagraph C.1.a.

d. The Parties will agree on facility design, construction, and operation, with advice from the Committee as provided in section F.

e. Once fish passage facilities are completed, all native fish species in the Cedar River, with the exception of sockeye salmon, will be allowed access to the municipal watershed through the fish ladders, as provided herein. The City will allow up to a total biomass of 46,500 pounds (e.g. about the equivalent of 1,000 chinook and 4,500 coho salmon) of adult chinook and coho salmon per year to pass into the habitat above the Landsburg Diversion Dam, provided the City has determined such action does not pose a risk to drinking water quality and public health. There will be no limit on passage of naturally produced steelhead trout. The City will monitor the effects of fish passage on drinking water quality and may increase or decrease the numbers of fish passed, based on the results of such monitoring, as described in subsection E.2. Prior to instituting measures to decrease fish passage, the City will select and consult with one or more independent experts, who will evaluate the situation and the available options, and will prepare a report with a recommendation as to whether fish passage can occur without posing a risk to drinking water quality and public health. The City will review the report with the Committee, and will provide an explanation for its decision regarding fish passage. In the event that the City decides to limit the numbers of fish allowed to pass above the diversion, it will do so pursuant to section E.2.e.

f. If, prior to construction of any of the fish passage and protection facilities provided for in this section, the City determines that it is unable to obtain the necessary permits, it shall so advise the Parties. If, after consultation with the Committee, all of the Parties agree that alternative mitigation should be pursued in lieu of one or more of the proposed facilities, then the City will commit remaining construction, operation, and monitoring funds, at a level, and according to a schedule that does not exceed the total of its original commitments, to alternative mitigation. In the event that the Parties cannot agree on alternative mitigation by two years after they begin deliberations on the subject, these monies shall be spent by the City for fish habitat acquisition, restoration, or enhancement within the Lake Washington Basin. Obligations for interim mitigation funding under subsections C.2.c, C.3.c, and C.4.c shall cease upon initiation of such alternative mitigation.

## **2. Upstream Passage Facilities**

a. The City will provide up to \$2,011,000 for the design, permitting (including any construction mitigation), and construction of upstream adult fish passage facilities at the Diversion Facilities.

b. The City will initiate design of upstream fish passage facilities immediately after the effective date of this agreement, with a target date for completing construction by the end of HCP Year 3, dependent on successful completion of permitting and environmental review.

c. If, due to a force majeure event or the City's inability to successfully complete any required environmental review or obtain the necessary permits, construction activities are not completed by the end of HCP Year 8, the City will provide interim mitigation funds at a rate of up to \$30,000 per year (1/3 the amount of the total annual interim mitigation funds for steelhead, coho and chinook), pro-rated in proportion to the fraction of each year that elapses between the beginning of the HCP year and the date construction is completed. This extended interim mitigation will cease in the event that the Parties decide that alternative mitigation be pursued, as provided for in C.1.f.

### **3. Downstream Passage Facilities**

a. The City will provide up to \$958,000 for the design, permitting (including any construction mitigation), and construction of downstream fish passage facilities at the Diversion Facilities.

b. The schedule for design and construction of downstream passage facilities shall be the same as for upstream passage facilities, as described in subsection C.2.b.

c. If, due to a force majeure event or the City's inability to successfully complete any required environmental review or obtain the necessary permits, construction activities are not completed by the end of HCP Year 8, the City will provide interim mitigation funds at a rate of up to \$30,000 per year (1/3 the amount of the total annual interim mitigation funds for steelhead, coho and chinook), pro-rated in proportion to the fraction of each year that elapses between the beginning of the HCP year and the date construction is completed, or until the Parties decide that alternative mitigation be pursued, as provided for in C.1.f.

### **4. Fish Screening Facilities**

a. The City will provide up to \$2,859,000 for the design, permitting (including any construction mitigation), and construction of screening facilities to minimize any entrainment of juvenile salmonids into the City's drinking water intake at the Diversion Facilities and to transport juvenile fish safely from the area upstream of the screens back to the river downstream of the diversion dam.

b. Design of these facilities will be initiated immediately after the effective date of this agreement, with a target date for completion by the end of HCP Year 3, dependent on successful completion of permitting and environmental review.

c. If the construction of the fish screening facilities has not been completed by the end of HCP Year 8, the City will provide interim mitigation funds at a rate of up to \$30,000 per year (1/3 the amount of the total annual interim mitigation funds for steelhead, coho and chinook), pro-rated over the fraction of each year that elapses until such time as construction is completed. This extended interim mitigation will cease in the event that the Parties decide that alternative mitigation be pursued, as provided for in C.1.f.

## **D. LONG-TERM MEASURES FOR SOCKEYE SALMON**

### **1. General**

a. To minimize and mitigate any long-term effects of the migration barrier created by the Diversion Facilities on sockeye salmon, the City will provide up to \$23,347,000 for the design, permitting (including construction mitigation), construction, and operation of a sockeye hatchery to replace the interim hatchery at Landsburg (as described in subsection D.2) and for habitat restoration and/or protection in the lower Cedar River (as described in subsection D.3). Such expenditures, as well as the dates for initiation or completion of the activities specified below, are subject to the City's ability to successfully complete the requisite review process under the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) and obtain any necessary permits within the cost schedules and time frames described in this section D.

b. The Parties, in consultation with the Committee, will oversee the long-term sockeye mitigation program, including design, construction, and operation of the replacement hatchery, including reviewing monitoring results and making adjustments in the program as necessary to meet program objectives, as described in Part E. The Parties will ensure that a comprehensive public involvement and environmental review process for the long-term hatchery program is carried out prior to the end of HCP Year 3, when the Parties will make final decisions regarding the design, capacity, operating guidelines, and adaptive management features of the program. This process will be paid for by the City, subject to the provisions of section A.6. Once the Parties have approved the capacity, design, operating guidelines, and adaptive management program, the City will arrange for the construction of the replacement sockeye hatchery, and will own the hatchery. The City will operate or contract with WDFW and/or another party to operate the replacement hatchery during the term of this agreement. Operations will be conducted pursuant to the monitoring and adaptive management provisions of section E, as well as other terms of this agreement.

c. If at any time all Parties to this LMA agree that the replacement sockeye hatchery is no longer appropriate, then the City will commit

any remaining construction, operation and/or monitoring funds to alternative mitigation at a level and according to a schedule that does not exceed the total of its original funding commitments for the sockeye fry production program. The form of the alternative mitigation shall be as agreed by the Parties, but in the event that no agreement is reached by two years after the Parties begin deliberations on the issue, the City shall spend any remaining funds for fish habitat acquisition, restoration, or enhancement in the Lake Washington Basin.

## **2. Replacement Sockeye Hatchery**

a. The City will provide a maximum of up to \$7,678,000 for the design, permitting (including construction mitigation), and construction of a replacement sockeye salmon hatchery, and associated broodstock collection and fry release facilities capable of producing up to 34,000,000 sockeye fry per year. These facilities are described more fully in section 4.3 of the HCP. In the event that the City is able to construct these facilities at a lower cost, the remaining funds may be spent for the benefit of any or all anadromous fish species as determined by the Parties, notwithstanding any other provision of this agreement, including section A.7.

b. As part of the planning and design phase for the sockeye hatchery in HCP Years 1 through 3, the City will make available up to \$200,000 to support development and evaluation of measures to improve sockeye broodstock collection practices. Development and evaluation of these measures will be overseen by the Parties, in consultation with the Committee, in an effort to improve the degree to which the interim and long term broodstock collection practices will meet the dual objectives of: (1) capturing a sufficient number of brood fish in a manner that helps insure the long term reproductive fitness, genetic diversity and adaptive capacity of the Cedar River sockeye population; and (2) avoiding and minimizing potential detrimental impacts on naturally reproducing salmonids in the Cedar River.

c. In HCP Year 1 the City will provide \$32,000 for the development of guidelines to direct the design, construction, operation and monitoring phases of the sockeye fry-production program, as further described in subsection E.3.b.

d. Design of the replacement sockeye hatchery will be initiated by the City in HCP Year 1. After completing the review process described in subsection D.1.b, the Parties shall agree in Year 3 as to the design, capacity, operating guidelines, and adaptive management program, developed pursuant to subsection E.3.b. The replacement hatchery facilities will be operational by September 1 of HCP Year 5, dependent on timely completion of permitting and environmental review.

e. Once the replacement sockeye hatchery is constructed, the City will provide up to \$300,000 per year to operate and maintain the facilities for

the term of this LMA. In the event that the City is able to operate these facilities at a lower cost, the remaining funds may be spent for the benefit of any or all anadromous fish species as directed by the Parties, notwithstanding any other provision of this agreement, including section A.7.

f. If, due to a force majeure event or the City's inability to successfully complete any required environmental review or obtain the necessary permits, the facilities have not been completed by September 1 of HCP Year 5, the City will continue to provide funding for the existing interim facility at a level of \$256,000 per year for each additional year beyond HCP Year 5 in which construction of the replacement hatchery has not been completed by September 1. In addition, the City shall make available an additional \$44,000 for each such additional year, for mitigation to be determined by agreement of the Parties. These additional expenditures will be subtracted from the remaining funds in this Cost Category, and the obligation for such expenditures will cease in the event that the Parties establish alternative mitigation measures pursuant to subsection D.1.c, above.

### **3. Lower Cedar River Habitat Restoration/Protection**

The City will provide up to \$1,637,000 in HCP Years 2 through 5 to acquire, restore, and/or protect habitat for any or all anadromous fish, especially chinook salmon, in the lower Cedar River outside the City's current property ownership boundary as directed by the Parties, in consultation with the Committee. Any unspent funds may be spent in subsequent years. This money shall be in addition to any monies reallocated to habitat restoration/protection from other activities.

## **E. MONITORING AND ADAPTIVE MANAGEMENT**

### **1. General**

a. The Parties agree that mitigation measures contained in this LMA are intended to benefit the fishery resources of the Cedar River by protecting, improving and increasing available habitat and fish production. The Parties recognize the importance of monitoring mitigation measures and the conditions of the fish populations to assure that the purposes of this LMA and the HCP are met. The Parties also acknowledge that available information on certain complex ecological, genetic, and demographic processes is not complete. Therefore, the City, in cooperation with the other Parties, will sponsor and conduct certain studies, as specified in this section E, and act on the results as indicated to manage anadromous fish mitigation in an adaptive fashion. The Parties are committed to use adaptive management to address critical questions as they arise, and make changes in management based on the results of monitoring to meet the specific objectives of the program. The details of adaptive management



for the sockeye mitigation program will be developed prior to the review and decision described in subsections D.1.b and D.2.d.

b. Except as otherwise provided, changes in all major aspects of study planning, implementation, and coordination with other related studies shall, within the indicated cost constraints, be subject to the approval of the Parties, in consultation with the Committee, which shall meet as frequently as appropriate to address study requirements. The City shall use its best efforts to complete final study reports no later than one year after completion of the respective studies.

## **2. Evaluation of Fish Passage and Protection Facilities**

a. Fish passage and protection facilities will be provided under this agreement to minimize any effects of the present migration barrier created by the Diversion Facilities on steelhead trout, and coho and chinook salmon. Subject to applicable permitting requirements, generally accepted standards and designs will be used to design, construct, and operate these facilities. To ensure that the mitigation measures are performing as intended, the City will provide the opportunity for the Parties to conduct a full final inspection of the completed facilities and will sponsor specified studies as described in this subsection E.2 to evaluate and monitor system performance.

b. The City will provide up to a total of \$110,000 during the first 12 years after completion of the upstream fish passage facilities at the Diversion Facilities to monitor the rate of adult fish passage, and to better understand run timing, the rate of passage, and the rate at which the populations recolonize previously blocked habitat.

c. Once the fish-screening facilities are constructed upstream of the drinking water intake, the City will provide up to a total of \$15,000 to perform hydraulic analyses to refine flow characteristics of the screens and demonstrate conformity with hydraulic parameters established by the Parties during the design of the facility.

d. The City will provide up to \$10,000 per year for a total of up to 6 years to measure the effects on drinking water of allowing anadromous fish above the Diversion Facilities. The first year of measurement will occur prior to the construction of the fish passage facilities to establish baseline parameters for selected water quality criteria. The remaining 5 years of measurement will be conducted in HCP Years 8, 10, 15, 20 and 25. If the results of the monitoring program indicate that the biomass of fish allowed to pass above the Diversion Facilities should be adjusted either upward or downward, based on drinking water quality or public health concerns, the City may act as provided in paragraph C.1.e, above, to establish new limits for fish passage. Under no circumstances will the number of fish passed above the Diversion Facilities be allowed to pose a risk to drinking water quality and public health.

e. If, to adequately protect drinking water quality, it becomes necessary to limit the biomass of adult fish allowed to pass above the Diversion Facilities below the biomass specified in C.1.e, the City will resume interim mitigation funding until such time as full fish passage can be restored. Under such circumstances, the City will provide up to \$30,000 per year for each species that must be limited, prorated in proportion to the reduction in coho and chinook biomass below the biomass specified in C.1.e. The Parties, in consultation with the Committee, shall agree on the form of such mitigation. If the Parties fail to agree on the form of such mitigation within two years of initiating discussion of the issue, then the City shall spend the funds for fish habitat acquisition, restoration, or enhancement within the Lake Washington Basin.

### **3. Evaluation of the Sockeye Fry-production Program**

a. Several key objectives have been established for the sockeye fry-production program. First, the replacement sockeye hatchery should be designed to produce up to 34 million fry, unless the Parties determine that a lower production capacity is appropriate. Second, the program should be designed to produce fry that are equivalent in quality to those that are produced naturally. Third, the program should avoid or minimize detrimental impacts on the reproductive fitness and genetic diversity of naturally reproducing sockeye salmon populations in the Cedar River and Bear Creek subbasins. Fourth, the program should avoid or minimize detrimental ecological impacts on native salmonids throughout the watershed.

b. During HCP Year 1, the Parties, in consultation with the Committee and consistent with their respective authorities and other applicable laws, shall develop guidelines to govern the design, construction, operation, and monitoring phases of the sockeye fry production program. The guidelines will include procedures for developing and modifying annual production targets.

c. The Parties recognize that adaptive response to emerging issues is desirable in management of the hatchery, and therefore have established a monitoring program to evaluate hatchery operations. The Parties recognize further that circumstances may occur which could cause them to modify expected outcomes or which could result in an inability to achieve production objectives. The City shall not be responsible for such circumstances or the results thereof.

d. To further ensure that the program is successful, the City will provide up to \$3,473,000, as outlined in Exhibit A, to monitor the performance and potential impacts of the sockeye fry production program. Decisions regarding interpretation of monitoring results, alterations in the monitoring program, and alterations in production program operations will be made by the Parties, except as specified elsewhere in this LMA.

e. If, based on the monitoring results, the Parties, in consultation with the Committee, conclude that certain components of the program implementation are not meeting program objectives (stated in paragraph E.3.a, above), then the Parties, by agreement, may alter the program to meet those objectives, provided such alterations do not result in expenditures earlier than provided for nor change the total dollar amount allocated to the sockeye salmon mitigation program.

f. If the sockeye fry-production program is discontinued according to the provisions set forth in subsection D.1.c. during the term of this LMA, or if the City is unable to complete construction of the replacement sockeye hatchery, then the City will commit remaining monitoring funds, at a level not to exceed the total of its original commitments, to alternative mitigation as directed by the Parties pursuant to subsection D.1.c.

## **F. CEDAR RIVER ANADROMOUS FISH COMMITTEE**

### **1. Membership**

The Cedar River Anadromous Fish Committee shall have 10 members, as follows: one for each signatory to this LMA, except the Governor; one for King County, contingent on the County's written endorsement of the HCP; one for the Muckleshoot Indian Tribe (if they are not a signatory); one representing the group of organizations that were signatory to the June 11, 1999 Notice of Appeal of the Final EIS for the HCP; and three other stakeholders selected by unanimous agreement of the Parties.

### **2. Committee Operation**

The Committee shall be formed and begin operation not later than ninety (90) days after the effective date of this agreement. Meetings of the Committee may be in person or by telephone or by such other method as may be acceptable to the members. The Committee may, by unanimous agreement of the Parties plus a majority vote of other members, adopt by-laws to govern administrative matters such as notices, record-keeping, frequency of meetings, and mechanisms for convening the Committee. The City will chair the Committee and provide administrative support for its operation.

### **3. Committee Role**

The Committee will provide advice and consultation to the City concerning the implementation of this agreement, and shall serve as a forum for coordination and communication among the members of technical information on the status and condition of anadromous fish stocks in the Cedar River and the implementation and oversight of interim and long-term mitigation measures for these species.

## **G. COMMITMENTS TO THE CITY BY THE OTHER PARTIES**

### **1. Commitments by the State of Washington**

a. The State of Washington, acting through its Governor and its WDFW, agrees that the City, if it is in substantial compliance with the terms of the LMA, including fully funding the annual operations of the facilities to be constructed under the terms of this agreement in the amounts set forth in Exhibit A, is in compliance with all requirements of existing state law with respect to the blockage of fish passage at Landsburg and the provision of fish guards (screens) on the water intake. “Substantial compliance” means compliance with all essential terms and conditions of the LMA in all respects material to achieving the objectives of the LMA. The State, acting through its Governor and its WDFW, releases the City during the term of this agreement from any liability to the State that the State contends may exist under existing state law in connection with the blockage to fish passage resulting from the Diversion Facilities, or in connection with operation of the water intake, except instream flows, which are covered by a separate agreement. Further, the State, acting through its Governor and its WDFW, releases the City from any and all retrospective claims for liability prior to the execution of this agreement under existing state law for blockage to fish passage resulting from the Diversion Facilities and for operation of the water intake if the agreement is not terminated by the City prior to the term as stated in A.4.

b. The State, acting through its Governor and its WDFW, agrees that, under existing state law and during the term of this agreement, any City actions to maintain and improve the Diversion Facilities would not be grounds to require any further mitigation for the blockage of fish, as long as the Diversion Facilities and any improvements constructed as part of this LMA remain operable. This paragraph is not intended to excuse any violations of permits applicable to Diversion Facilities.

### **2. Commitments by the Federal Parties**

a. NMFS and USFWS agree that the mitigation measures set forth in this LMA, in combination with the other measures set forth in the City’s HCP, sufficiently minimize and mitigate for take of Covered Species to meet all requirements of the Endangered Species Act, and entitle the City to issuance of an incidental take permit under the procedures set forth in the IA.

b. NMFS and USFWS agree that any City actions to maintain and improve the Diversion Facilities would not be grounds to require any further mitigation for blockage of fish or operation of the water intake, as long as the facilities constructed as part of this agreement remain operable, and provided that any such maintenance or improvement does not affect Covered Species to a significantly greater degree than that analyzed under the HCP.

**IN WITNESS WHEREOF**, the City of Seattle has caused this Landsburg Mitigation Agreement to be executed by its Mayor pursuant to Resolution 29977, as amended by Resolution 30091, and other Parties have executed the same pursuant to applicable legal authorities.

**THE CITY OF SEATTLE**

By: \_\_\_\_\_  
Paul Schell, Mayor

Date: \_\_\_\_\_

**THE STATE OF WASHINGTON**

By: \_\_\_\_\_  
Gary Locke, Governor

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Jeff Koenings, Director  
Department of Fish and Wildlife

Date: \_\_\_\_\_

**U.S. DEPARTMENT OF COMMERCE,  
NATIONAL MARINE FISHERIES SERVICE**

By: \_\_\_\_\_  
William W. Stelle, Regional Administrator

Date: \_\_\_\_\_

**DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE**

By: \_\_\_\_\_  
Tom Dwyer, Deputy Regional Director

Date: \_\_\_\_\_

**EXHIBIT A**  
**to the**  
**LANDSBURG MITIGATION AGREEMENT**

**LANDSBURG DAM MITIGATION AGREEMENT COSTS TABLE**